

Oroville Facilities Relicensing FERC Project No. 2100 Preliminary Draft Study Plan Package Presentation

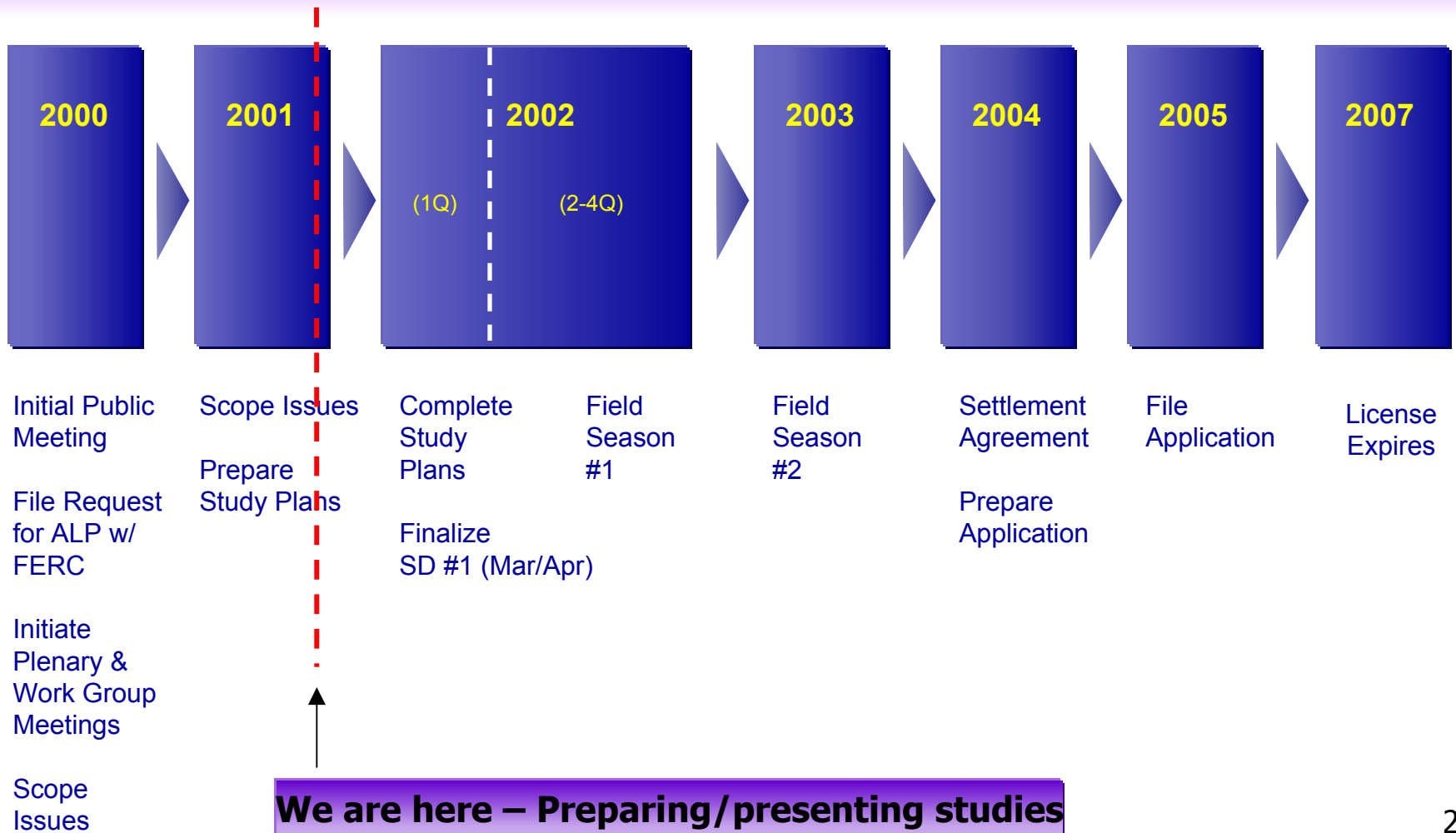
Plenary Group Presentation

Oroville, California

December 11, 2001



Oroville Facilities Relicensing Project No 2100 Overall Schedule: 2001 to 2007



Near Term Schedule



Goals of Study Plan Review Process

- Review, approve study plan package
- Secure consensus-backed Preliminary Final Study Plan Package by March 2002
- Begin critical path studies ASAP
- Finalize Scoping Document #1 by March/April 2002

Preliminary Draft Study Plan Package

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- 2.0 Study Plan Abstracts**
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- 6.0 Engineering and Operations Study Plans**
- 7.0 Environmental Study Plans**

FIGURES

- 1-1 Role of Studies in Relicensing Process**
- 1-2 Conceptual Study Plan Framework**
- 1-3 Study Plan Review Process**

ATTACHMENTS

- 1-1 Study Coordination Matrix**
- 1-2 List of Critical Path Studies**
- 1-3 List of Project Study Plans**

Study Plan Review Process

Dec 2001

Jan 2002

Feb 2002

Mar 2002

Plenary

- PDSPP
- Near-term schedule
- SD#1 Highlights

- Heartburn issues on study plans
- Critical Path studies

- Critical Path studies
- Revised Study Plans
- Review WG SD#1 feedback

- Final approval of study plans
 - Critical Path
 - Full package discussed
 - Include SD #1 feedback

Work Groups

- Forward Study Plans

- Plenary input
- SD#1 comments
- Revise Study Plans

- Plenary feedback
- Continue detailed methodologies
- Continue coordination

- Finalize methodologies
- Continue coordination
- Implementation assistance

Role of Plenary Study Package/Review — Dec 2001-Mar 2002

- Assure Oroville Facilities **Relicensing issues** identified, addressed
- Assure appropriate **balance** across issues
- Assure **scope** of studies is appropriate
- Review, assure **methods** appropriate
- Assure **coordination** among studies/work groups

Role of Work Groups and Study Package Development

Dec 2001 – Mar 2002

- Review **plenary input**, provide feedback
- Review **Scoping Document #1 feedback**, revise study plans accordingly
- **Technical development** of study plans (of those not complete)
- **Finalize detailed methods** (of those not complete)
- **Finalize coordination** across studies, work groups

Ongoing Role of Plenary/Work Group Apr 2002-Dec 2002

Plenary

- **Study implementation**
touch points

Work Groups

- **Continue coordination**
- **Assist with implementation** e.g.
selection of transects, field work participation
- **Review data,**
interview outputs
- **Address implementation issues**
that may arise

Study Coordination

- Coordination Sections in Study Plans
- Coordination Matrix (updated)
- Internal study coordination meetings
- Next step
 - Develop critical path Gantt chart
 - Detailed conceptual framework

Resource Area Managers Study Plan Review

- Study Highlights
- Highlight efforts to date
- Review studies list, critical path studies
- Review status of studies development, near-term schedule

Study Plans for January Review

Land Use (Jan Review/Approval)

- SP-L1 Land Use Study
- SP-L4 Aesthetic Impact Assessment

Recreation (Jan Review/Approval)

- SP-R7 Reservoir Boating Study
- SP-R9 Existing Recreation Use Study
- SP-R13 Recreation Surveys
- SP-R18 Recreation Activity and Spending Economics Study

Study Plans for January Review

Cultural Resources (Jan Review/Approval)

- SP-C1 Cultural Resources Inventory

Eng. & Ops. (Jan Review/Approval)

- SP-E1 Model Development
 - SP-E1a Statewide Operations
 - SP-E1b Local Operations
 - SP-E1c Oroville Reservoir Temperature
 - SP-E1d Thermalito Complex Temperature
 - SP-E1e Feather River Temperature
 - SP-E1f Feather River Flow-Stage Temperature
- SP-E6 Downstream Control of Temperature

Study Plans for January Review

Environmental Study Plans (Jan Discussion/Review)

- SP-W1 Project Effects on Water Quality Designated Beneficial Uses for Surface Water
- SP-W5 Project Effects on Groundwater
- SP-W6 Project Effects on Temperature Regime
- SP-F3.1 Evaluation of Project Effects on Resident Fish and Their Habitat within Lake Oroville, its upstream Tributaries, the Thermalito Complex, and the Oroville Wildlife Area
- SP-F3.2 Evaluation of Project Effects on Resident Fish and Their Habitat in the Feather River Downstream of the Fish Barrier Dam
- SP-F10 Evaluation of Project Effects on Anadromous Salmonids and their Habitat
- SP-F13 *(Effects on CA Special Status and ESA Species — Pending Further Work Group Review)*
- SP-F16 Evaluation of Project Effects on Instream Flows and Fish Habitat
- SP-T1 Effects of Project Features and Operation on Wildlife and Wildlife Habitat
- SP-T2 Project Effects on Special Status Species
- SP-T3/5 Riparian Resources, Wetlands, and associated floodplains
- SP-T4 Biodiversity, Vegetation Communities and Wildlife Habitat Mapping
- SP-G1 Effects of Project Operations on Geomorphic Processes Upstream of Oroville Dam
- SP-G2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam

January Study Review Agenda

- Land Use, Cultural, Recreation, Eng & Ops (Critical Path Studies)
 - ID "Heartburn" Issues
 - Review/Approve
- Environmental (Critical Path Studies)
 - ID "Heartburn" Issues
 - Review
- All Other Study Plans
 - ID "Heartburn" Issues

Oroville Facilities Relicensing FERC Project No. 2100 Land Use, Land Management, and Aesthetics Studies



Plenary Group Meeting
Oroville, California

December 11, 2001

Land Use, Land Management, and Aesthetics Update

- The Work Group met 8 times between March 2001 and November 2001 to review and develop 5 Study Plans.
- The Work Group formally reviewed 4 of the 5 Study Plans (SP-L1 to SP-L4) and agreed to forward them to the Plenary Group for its review and consideration.
- The contents of SP-L5 were conceptually discussed by the Work Group, as well as issues associated with fuel load management. However, the Work Group has not reviewed this current draft.

Participants in the Land Use, Land Management, and Aesthetics Work Group and Task Force

- Equestrian Trail Riders
- Butte County
- Zone 7 Water Agency
- Ca Dept. of Parks and Recreation
- State Water Contractors
- CA Dept. of Fish and Game
- Enterprise Rancheria
- California Horseman's Association
- Mooretown Rancheria
- Dept. of Water Resources
- Butte County Citizen's for Fair Government
- Butte County Tax Payers Association
- City of Oroville
- USDA Forest Service
- Enterprise Rancheria
- Feather River Nature Center
- Bidwell Marina

Study Highlights

- Existing and future fuel loads, fuel management practices, coordination of fuel management activities
- Uses of project lands for public use, access, open space, recreational issues
- Appropriate landscaping, restoration, preservation programs for aesthetic enhancement of project lands
- Effects of construction debris, garbage on overall appearance

Land Use, Land Management, and Aesthetics Studies

- SP-L1 Land Use Study
- SP-L2 Land Management Study
- SP-L3 Comprehensive Plan Consistency
- SP-L4 Aesthetic Impact Assessment
- SP-L5 Fuel Load Management

Jan 2002 to Mar 2002 Schedule

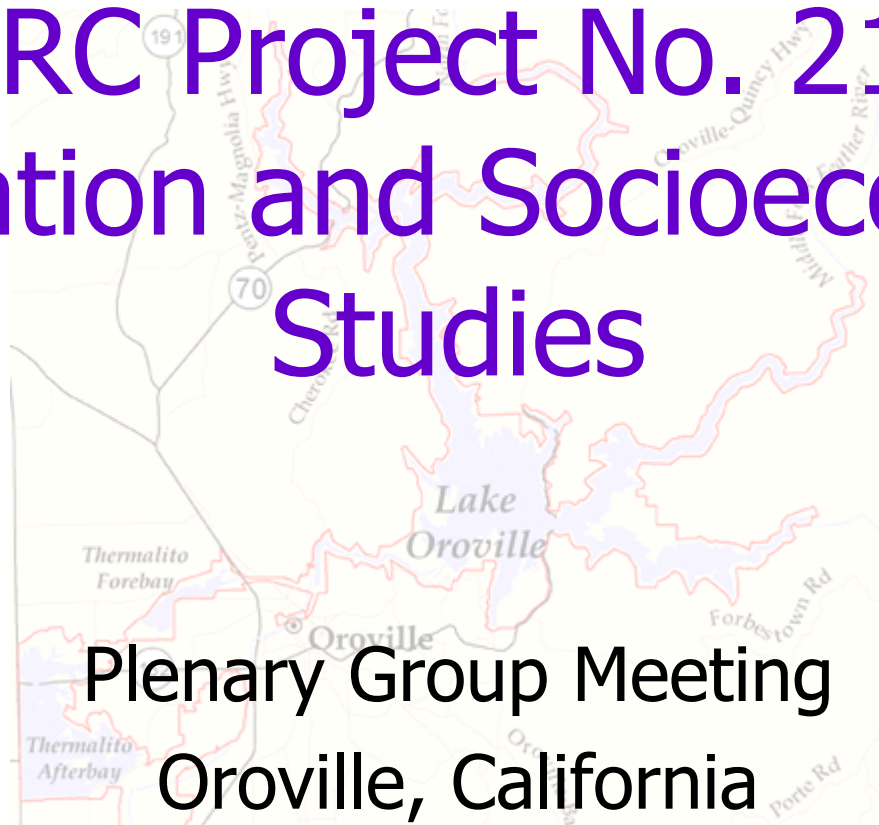
Plenary

- Review, approve critical path studies:
 - SP-L1 Land Use Study
 - SP-L4 Aesthetic Impact Assessment
- Review, approve all other studies

Work Group

- Address SD#1 comments
- Address Plenary comments

Oroville Facilities Relicensing FERC Project No. 2100 Recreation and Socioeconomics Studies



Plenary Group Meeting
Oroville, California

December 11, 2001

Recreation and Socioeconomics Update

- The Task Force met 5 times between September 20, 2001 and November 28, 2001 to develop and review Study Plans
- The Work Group received the 19 Study Plans on December 6, 2001, began review, and agreed to forward the Study Plan package to the Plenary Group
- Review of recent edits and other minor changes is continuing

Recreation and Socioeconomics Work Group and Task Force

- City of Oroville
- County of Butte Relicensing Team
- JPA (Dangermond & Associates)
- Feather R. Rec. & Parks Dist.
- CA Dept. of Water Resources
- CA Dept. of Fish and Game
- CA Dept. of Parks and Recreation
- CA Dept. of Boating & Waterways
- Water Resources Control Bd.
- Equestrian Trial Riders
- California Horseman's Association
- Oroville Pageant Riders
- Chico Paddleheads
- American Whitewater
- Enterprise Rancheria
- Cherokee Tribal Council
- Mooretown Rancheria
- Berry Creek Rancheria
- Kon Kow Tribe
- Bidwell Marina
- USDA Forest Service
- National Park Service
- FERC
- Butte Co. Citizens for Fair Gov't.
- Center for Economic Development
- Butte County Taxpayers Association
- Lk. Oroville Fish Enhancement Comm.
- Feather River Nature Center
- Paradise Chamber of Commerce
- Berry Creek Improvement Club
- Experimental Aircraft Association
- Oroville Model Airplane Club
- Oroville Foundation of Flight
- State Water Contractors
- Metropolitan Water Dist. So. Cal.
- Santa Clara Valley Water Dist.
- Butte Sailing Club
- Interested Citizens

Issue and Study Highlights

- Adequacy of existing project recreation facilities, maintenance, and safety
- Appropriate project-related recreation funding, development, and management structure
- Assess economic impacts of operating the Oroville facilities on local governments, residents, agriculture, businesses and other interests in Butte County
- Explore Project-related opportunities, including access, to accommodate current use and future demand

Recreation and Socioeconomics Studies

- SP-R1 Public Access Assessment
- SP-R2 Recreation Safety Assessment
- SP-R3 Assess Relationship of Project Operations on Recreation
- SP-R4 Assess Relationship of Fish and Wildlife Management
- SP-R5 Assess Recreation Areas Management
- SP-R6 ADA Access Study
- SP-R7 Reservoir Boating Study
- SP-R8 Carrying Capacity Study
- SP-R9 Existing Recreation Use Study
- SP-R10 Recreation Facilities Inventory
- SP-R11 Recreation and Public Use Assessment
- SP-R12 Projected Recreation Use
- SP-R13 Recreation Surveys
- SP-R14 Assess Regional Recreation and Barriers to Recreation Use
- SP-R15 Recreation Suitability Study
- SP-R16 Whitewater and River Boating
- SP-R17 Recreation Needs Assessment
- SP-R18 Recreation Activity, Spending, and Associated Economic Impacts
- SP-R19 Fiscal Study

Jan 2002 to Mar 2002 Schedule

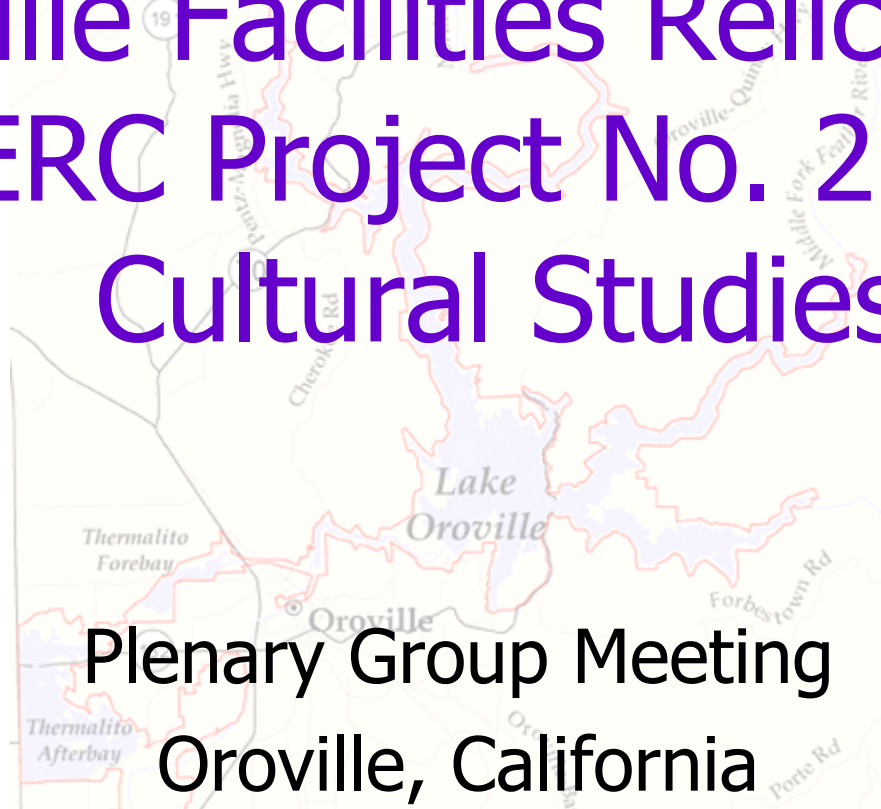
Plenary

- Review, approve critical path studies:
 - SP-R7 Reservoir Boating Study
 - SP-R9 Existing Recreation Use Study
 - SP-R13 Recreation Surveys
 - SP-R18 Recreation Activity and Spending Economics Study
- Review, approve all other studies

Work Group

- Revise/Finalize Study Plans based on:
 - Work Group Review and Comments
 - SD#1 comments
 - Plenary Group Comments

Oroville Facilities Relicensing FERC Project No. 2100 Cultural Studies



Plenary Group Meeting
Oroville, California

December 11, 2001

Cultural Work Group Meetings

- The Work Group has met three times between September 2001 and November 2001 to review Study Plans
- Four Study Plans have been approved by the Work Group

Participants in the Cultural Work Group and Task Force

- FERC
- USDA Forest Service
- US Bureau of Land Management
- Plumas National Forest
- Dept. of Water Resources
- State Office of Historic Preservation
- State Water Contractors
- Metropolitan Water District
- CA Dept. of Parks and Recreation
- Butte County Citizens for Fair Govt.
- Butte County
- Butte County Historical Society
- Butte County Tax Payers Association
- Paradise Chamber of Commerce
- Oroville Historic Advisory Board
- Berry Creek Citizen's Committee
- Berry Creek Improvement Club
- Berry Creek Rancheria
- Mooretown Rancheria
- Enterprise Rancheria
- CA Autochthon Peoples Foundation
- Maidu Tribe
- Mechoopda Tribe
- Konkow Valley Maidu
- Cherokee Tribe
- Cherokee Preservation Society
- African American Community
- Strawberry Valley Rancheria
- Oroville Pageant Riders
- Equestrian Trail Riders
- California Horseman's Association

Study Highlights

- Protecting the Cultural Resources
- Inventory of cultural resources within the Area of Potential Effects
- Determining the effects of existing and future project facilities and operations on cultural resources within the Area of Potential Effects
- Evaluating whether recreation and other uses tied to project lands conflicts with the protection of cultural resources

Cultural Studies

- SP-C1 Cultural Resources Inventory
- SP-C2 Cultural Resources Evaluation
- SP-C3 Cultural Resources Management
- SP-C4 Cultural Interpretation and Education Assistance

Jan 2002-Mar 2002 Schedule

Plenary

- Review, approve critical path studies:
 - SP-C1 Cultural Resources Inventory
- Review, approve all other studies

Work Group

- Address SD#1 comments
- Address Plenary comments

Oroville Facilities Relicensing FERC Project No. 2100 Engineering and Operations Studies



Plenary Group Meeting
Oroville, California

December 11, 2001

Engineering & Operations Update

- The Work Group has met 11 times between March 1, 2001 and December 5, 2001 to review Draft Study Plans
- The Task Force has met 3 times between August 29, 2001 and October 30, 2001 to develop Draft Study Plans
- 7 Draft Study Plans have been approved by the Work Group

Participants in the Engineering & Operations Work Group and Task Force

- Bidwell Marina
- Butte County
- CA Dept. of Fish and Game
- California Horseman's Association
- Cherokee Tribe
- Dept. of Water Resources
- Enterprise Rancheria
- Kern County Water Assoc.
- Lime Saddle Marina
- Metropolitan Water District
- National Weather Service
- Oroville Model Airplane Club
- Oroville Wyandotte Irrigation Dist.
- State Water Contractors
- Sutter County
- US Army Corps of Engineers
- US Fish And Wildlife Service
- Western Canal Water Dist.
- Yuba City
- Yuba County Water Agency

Jan 2002 to Mar 2002 Schedule

Plenary

- Review and approve critical path studies (E1 & E6):
- Review and approve all other studies

Work Group

- Complete detailed Study Plans
- Address Scoping Document #1 comments
- Address Plenary comments

Engineering & Operations Studies

- SP-E1 Model Development
- SP-E2 Hydrology/Operations Studies
- SP-E3 Additional Hydro Generation/Ancillary
- SP-E4 Flood Management
- SP-E6 Downstream Control of Temperature
- SP-E7 Reservoir Cold Water Pool Evaluation
- SP-E8 Temperature Impacts of Pumpback Operation

Engineering & Operations Studies

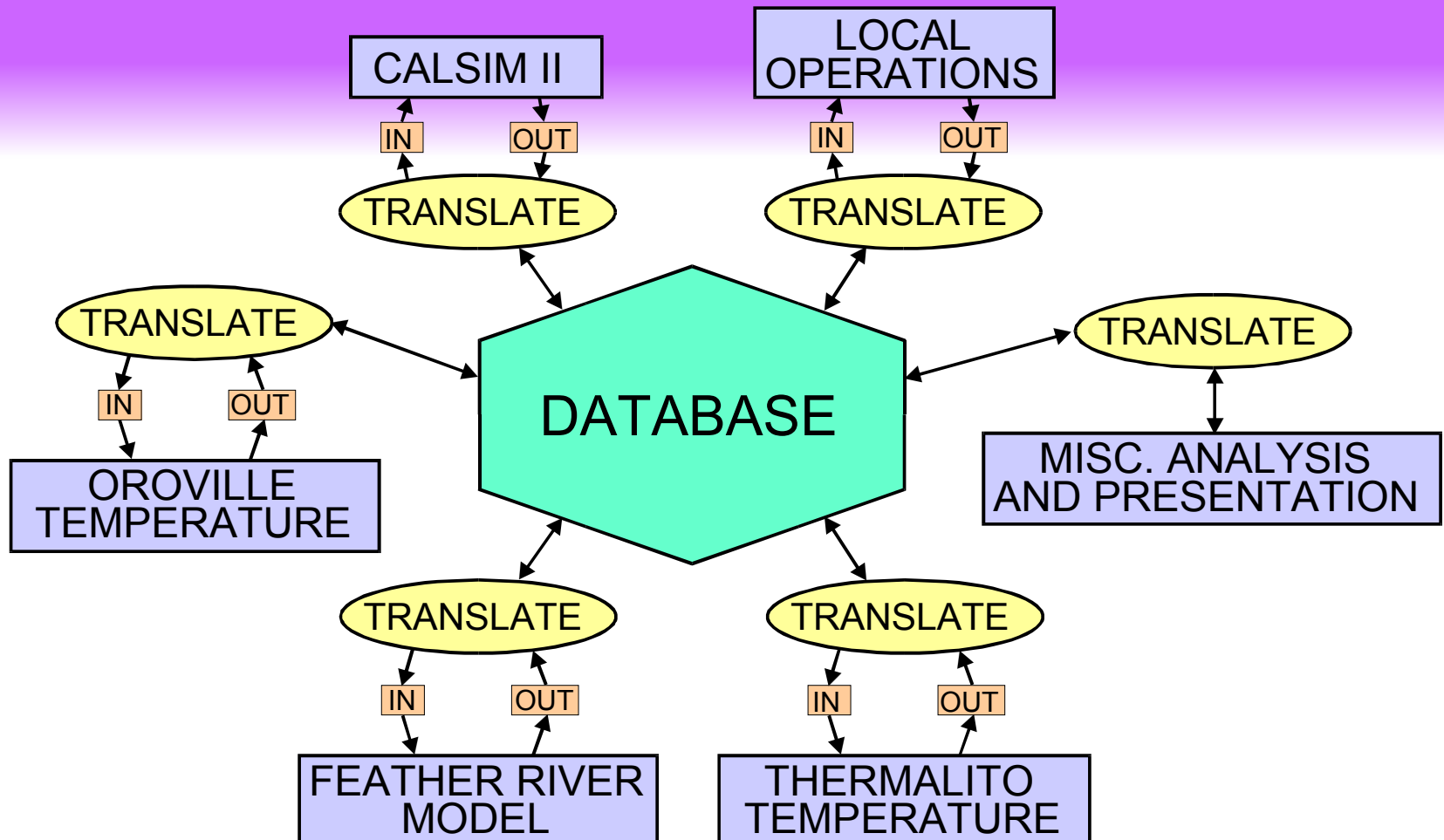
- SP-E1 Model Development
- SP-E2 Hydrology/Operations Studies
- SP-E3 Additional Hydro Generation/Ancillary
- SP-E4 Flood Management
- SP-E5 Fish Passage (moved to Environ Workgroup)
- SP-E6 Downstream Control of Temperature
- SP-E7 Reservoir Cold Water Pool Evaluation
- SP-E8 Temperature Impacts of Pumpback Operation
- SP-E?? Hydrology (SP-W8 from Environ Workgroup)

Engineering & Operations Studies

- **SP-E1 Model Development**
- SP-E2 Hydrology/Operations Studies
- SP-E3 Additional Hydro Generation/Ancillary
- SP-E4 Flood Management
- SP-E6 Downstream Control of Temperature
- SP-E7 Reservoir Cold Water Pool Evaluation
- SP-E8 Temperature Impacts of Pumpback Operation

Engineering & Operations Studies

- SP-E1 Model Development
 - SP-E1.1 Statewide Operations
 - SP-E1.2 Local Operations
 - SP-E1.3 Oroville Reservoir Temperature
 - SP-E1.4 Thermalito Complex Temperature
 - SP-E1.5 Feather River Temperature
 - SP-E1.6 Feather River Flow-Stage
- SP-E2 Hydrology/Operations Studies
- SP-E3 Additional Hydro Generation/Ancillary
- SP-E4 Flood Management
- SP-E6 Downstream Control of Temperature
- SP-E7 Reservoir Cold Water Pool Evaluation
- SP-E8 Temperature Impacts of Pumpback Operation



Engineering & Operations Studies

- SP-E1 Model Development
- **SP-E2 Hydrology/Operations Studies**
- SP-E3 Additional Hydro Generation/Ancillary
- SP-E4 Flood Management
- SP-E6 Downstream Control of Temperature
- SP-E7 Reservoir Cold Water Pool Evaluation
- SP-E8 Temperature Impacts of Pumpback Operation

Draft Study Plan No. E2

Hydrology/Operations Studies

Using the tools

- Perform specific operations modeling
- Support the other Work Groups and their studies

Providing the results

- Results will be available to all Work Groups
- Requires close coordination with other Work Groups

Engineering & Operations Studies

- SP-E1 Model Development
- SP-E2 Hydrology/Operations Studies
- SP-E3 Additional Hydro Generation/Ancillary
- SP-E4 Flood Management
- **SP-E6 Downstream Control of Temperature**
- SP-E7 Reservoir Cold Water Pool Evaluation
- SP-E8 Temperature Impacts of Pumpback Operation

Draft Study Plans E6-8

Downstream Control of Temperature

- How far downstream does Oroville releases influence water temperature?

Reservoir Cold Water Pool Evaluation

- How big is the cold water budget?

Temperature Impacts of Pumpback Operation

- How does pumpback effect temperature operations?

Engineering & Operations Studies

- SP-E1 Model Development
- SP-E2 Hydrology/Operations Studies
- **SP-E3 Additional Hydro Generation/Ancillary**
- SP-E4 Flood Management
- SP-E6 Downstream Control of Temperature
- SP-E7 Reservoir Cold Water Pool Evaluation
- SP-E8 Temperature Impacts of Pumpback Operation

Draft Study Plan No. E3

Additional Hydro-Generation

Study Highlights

Goals/Objectives: Evaluate new or improved ways to:

- Generate additional hydropower
- Enhance the efficiency of power generation.

Major Factors:

Water supply, power economics, Hydro Generation Technology.

Major impacts:

- Environmental, Recreation, Flood Management

Draft Study Plan No. E3

Additional Hydro-Generation

Study Highlights

Review hydropower studies

Completed

- Edward Hyatt Powerplant Modernization 1997
- Sutter Butte Canal Outlet 1981
- Palermo Canal Outlet 1981
- Oroville-Thermalito Power Complex Phase II.-2001

In progress

- Thermalito Powerplant-Feasibility of Refurbishment. 2001
- Thermalito Afterbay River Outlet-2001

Draft Study Plan No. E3

Additional Hydro-Generation

Study Highlights

Update Studies

- Sutter Butte Canal Outlet
- Palermo Canal Outlet
- Oroville-Thermalito Power Complex Phase 2

Evaluate New Concepts

- Additional Generation at Thermalito Diversion Dam
- Spinning Reserves by motoring the units
- Hydropower from Thermalito Power Canal

Engineering & Operations Studies

- SP-E1 Model Development
- SP-E2 Hydrology/Operations Studies
- SP-E3 Additional Hydro Generation/Ancillary
- **SP-E4 Flood Management**
- SP-E6 Downstream Control of Temperature
- SP-E7 Reservoir Cold Water Pool Evaluation
- SP-E8 Temperature Impacts of Pumpback Operation

Draft Study Plan No. E4

Flood Management Study

Study Highlights

Goals and Objectives

- Document current license requirements, studies
- Evaluate flood management improvements:
 - Current information/technology
 - Alternative and Coordinated operations
 - Flood control structures
 - Warning Systems

Impacts:

Water Supply, Environment , Recreation & Socioeconomic,
Land Use, Cultural

Draft Study Plan No. E4

Flood Management Study

Study Highlights

Review Flood Management Studies

- PMF (Probable Maximum Flood) Analysis
- Inundation Studies (3)
- Forecast Based Operation (FBO) of Oroville Dam.
- Emergency Action Plan (EAP)

Possible Updates

- PMF Analysis
- Inundation Studies
- Forecast Based Operation (FBO) of Oroville Dam.

Draft Study Plan No. E4 Flood Management Study Study Highlights

Coordinate with ongoing studies by other agencies

- Comprehensive Study
- Yuba-Feather Supplemental Flood Control Project
- Sutter County Feasibility
- Potential Update of Flood Operations Manual

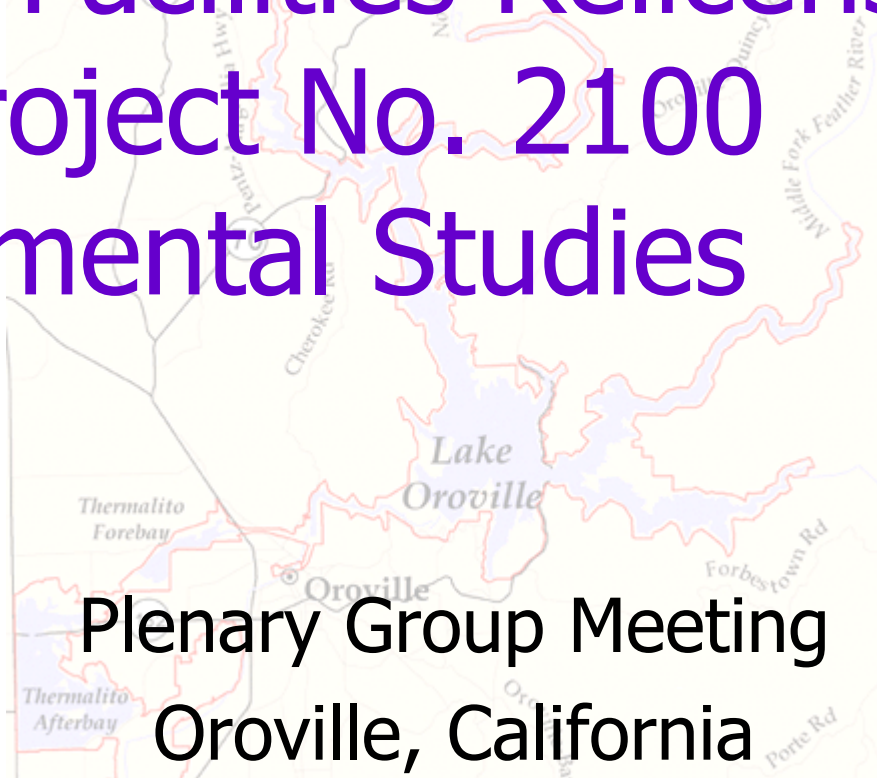
Status: Draft Preliminary

Workshop

Feather River Flood Management Issues

December 17, 2001

Oroville Facilities Relicensing FERC Project No. 2100 Environmental Studies



Plenary Group Meeting
Oroville, California

December 11, 2001

Environmental Update

- The Work Group has met 2 times between November 2001 and December 2001 to review Study Plans
- The Task Force has met 6 times between October 2001 and November 2001 to review Study Plans
- Study Plans have been forwarded by the Work Group for Plenary review

Participants in the Environmental Work Group and Task Force

- Konkow Tribe
- Feather Falls Casino
- Dept. of Water Resources
- Equestrian Trail Riders
- USDA Forest Service
- US Fish and Wildlife Service
- State Water Contractors
- Paradise Chamber of Commerce
- Joint Water Districts Board
- Butte County Citizens for Fair Government
- Butte County Tax Payers Association
- Feather River Nature Center
- Democratic Club
- City of Oroville
- Plumas National Forest
- Berry Creek Citizen's Commission
- Metropolitan Water District
- Enterprise Rancheria
- Oroville Pageant Riders
- SWRCB
- NMFS
- Butte Sailing Club
- CA Dept. of Fish and Game
- CA Dept. of Parks and Recreation
- Mooretown Rancheria
- Trout Unlimited
- Native American Heritage Committee
- City of Oroville
- Bidwell Marina
- American Rivers
- Cherokee Indian Tribe
- California Waterfowl Association
- JEM Farms

Study Highlights

Water Quality:

- Effect of operations and facilities on water quality of the Feather River, tributaries, downstream waters
- Effects of facilities on water temperatures

Fisheries:

- Effect of operations and facilities on the behavior, reproduction, survival, habitat of warm- and cold-water fish
- Effects of cumulative impacts on regional fisheries, fish passage

Terrestrial:

- Effect of operations on federal and state listed endangered species
- Project effects on biodiversity and ecosystem health and stability

Geomorphology:

- Project effects on channel capacity and potential need for more storage/flood protection
- Project effects on sediment accumulation upstream

Environmental Studies: Geomorphology

- SP-G1 Effects of Project Operations on Geomorphic Processes Upstream of Oroville Dam
- SP-G2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam
- SP-G3 *(Cumulative Geomorphic Effects – Pending Further Discussion of Cumulative Effects)*

Environmental Studies: Water Quality

- SP-W1 Project Effects on Water Quality Designated Beneficial Uses for Surface Water
- SP-W2 Contaminant Accumulation in Sediments and Aquatic Food Chain
- SP-W3 Recreational Facilities and Operations Effects on Water Quality
- SP-W4 *(Hatchery Effects on Water Quality – Pending Further Discussion)*
- SP-W5 Project Effects on Groundwater
- SP-W6 Project Effects on Temperature Regime
- SP-W7 Land and Watershed Management
- SP-W9 Project Effects on Natural Protective Processes
- SP-W10 *(Cumulative Water Quality Effects — Pending further Discussion of Cumulative Effects)*

Environmental Studies: Terrestrial

- SP-T1 Effects of Project Features and Operation on Wildlife and Wildlife Habitat
- SP-T2 Project Effects on Special Status Species
- SP-T3/5 Riparian Resources, Wetlands, and associated floodplains
- SP-T4 Biodiversity, Vegetation Communities and Wildlife Habitat Mapping
- SP-T6 Interagency Wildlife Management Coordination and Wildlife Management Plan Development
- SP-T7 Project Effects on Noxious Terrestrial and Aquatic Plant Species
- SP-T8 Project Effects on Undesirable Non-Native Wildlife
- SP-T9 Recreation and Wildlife
- SP-T10 Effects of Project Features, Operations, and Maintenance on Upland Plant Communities
- SP-T11 Fire Prevention/Fuel Load Control
- SP-TXX *(Cumulative Terrestrial Effects – Pending Further Discussion of Cumulative Effects)*

Environmental Studies: Fisheries

- SP-F1 Evaluating the Impacts of Project Operation on Non-fish Aquatic Resources
- SP-F2 Evaluation of Project Effects on Fish Diseases
- SP-F3.1 Evaluation of on Resident Fish and Their Habitat within Lake Oroville, Its Upstream Tributaries, the Thermalito Complex, and the Oroville Wildlife Area
- SP-F3.2 Evaluation of Project Effects on Resident Fish and Their Habitat in the Feather River Downstream of the Fish Barrier Dam
- SP-F4 *(Evaluation of Project Effects on Fish Passage Upstream of Lake Oroville – Pending)*
- SP-F5 Project Effect of FERC Project Fisheries Management Plans on a Balanced Fishery of Resident and Anadromous Fish and Their Habitats
- SP-F7 Evaluation of Project Effects of Project Fisheries on Tributary Fisheries

Environmental Studies: Fisheries (contd.)

- SP-F8 Transfer of Energy and Nutrients by Anadromous Fish Migrations
- *SP-F9 (Hatchery Effects on Salmonoids — Pending Further Work Group Review)*
- SP-F10 Evaluation of Project Effects on Anadromous Salmonids and their Habitat
- *SP-F13 (Effects on CA Special Status and ESA Species — Pending Further Work Group Review)*
- SP-F15 Evaluation of the Feasibility to Provide Passage for Anadromous Salmonids Past Oroville Facility Dams
- SP-F16 Evaluation of Project Effects on Instream Flows and Fish Habitat
- SP-F21 Project Effects on Predation of Feather River Juvenile Anadromous Salmonids
- SP-FXX *(Cumulative Fisheries Effects – Pending Further Discussion of Cumulative Effects)*

Jan 2002 to Mar 2002 Schedule

Plenary

- Review, approve critical path studies:
 - SP-W1 Project Effects on Water Quality Designated Beneficial Uses for Surface Water
 - SP-W5 Project Effects on Groundwater
 - SP-W6 Project Effects on Temperature Regime
 - SP-F3.1 Evaluation of Project Effects on Resident Fish and Their Habitat within Lake Oroville, its upstream Tributaries, the Thermalito Complex, and the Oroville Wildlife Area
 - SP-F3.2 Evaluation of Project Effects on Resident Fish and Their Habitat in the Feather River Downstream of the Fish Barrier Dam
 - SP-F10 Evaluation of Project Effects on Anadromous Salmonids and their Habitat
 - SP-F13 *(Effects on CA Special Status and ESA Species — Pending Further Work Group Review)*
 - SP-F16 Evaluation of Project Effects on Instream Flows and Fish Habitat
 - SP-T1 Effects of Project Features and Operation on Wildlife and Wildlife Habitat
 - SP-T2 Project Effects on Special Status Species
 - SP-T3/5 Riparian Resources, Wetlands, and associated floodplains
 - SP-T4 Biodiversity, Vegetation Communities and Wildlife Habitat Mapping
 - SP-G1 Effects of Project Operations on Geomorphic Processes Upstream of Oroville Dam
 - SP-G2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam

Jan 2002 to Mar 2002 Schedule

Plenary

- Review, approve all other studies

Work Group

- Complete detailed study plans for:
 - January 2002
 - Geomorphology
 - Water Quality
 - Terrestrial
 - February 2002
 - Fisheries
- Address SD#1 comments
- Address Plenary comments

Oroville Facilities Relicensing FERC Project No. 2100 Preliminary Draft Study Plan Package Presentation

“Wrap Up”

Plenary Group Presentation

Oroville, California

December 11, 2001



Study Plans for January Review

Land Use (Jan Review/Approval)

- SP-L1 Land Use Study
- SP-L4 Aesthetic Impact Assessment

Recreation (Jan Review/Approval)

- SP-R7 Reservoir Boating Study
- SP-R9 Existing Recreation Use Study
- SP-R13 Recreation Surveys
- SP-R18 Recreation Activity and Spending Economics Study

Study Plans for January Review

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 - SP-E1e Feather River Temperature
 - SP-E1f Feather River Flow-Stage Temperature
- SP-E6 Downstream Control of Temperature

Study Plans for January Review

Environmental Study Plans (Jan Discussion/Review)

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- SP-F16 Evaluation of Project Effects on Instream Flows and Fish Habitat
- SP-T1 Effects of Project Features and Operation on Wildlife and Wildlife Habitat
- SP-T2 Project Effects on Special Status Species
- SP-T3/5 Riparian Resources, Wetlands, and associated floodplains
- SP-T4 Biodiversity, Vegetation Communities and Wildlife Habitat Mapping
- SP-G1 Effects of Project Operations on Geomorphic Processes Upstream of Oroville Dam
- SP-G2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam

January Study Review Agenda

- Land Use, Cultural, Recreation, Eng & Ops (Critical Path Studies)
 - ID “Heartburn” Issues
 - Review/Approve
- Environmental (Critical Path Studies)
 - ID “Heartburn” Issues
 - Review
- All Other Study Plans
 - ID “Heartburn” Issues

Oroville Facilities Relicensing FERC Project No. 2100 Data / Information Management Presentation

A background map of the Lake Oroville area in California. The map shows Lake Oroville in the center, with the city of Oroville below it. To the west of the lake is Thermalito Forebay and Thermalito Afterbay. To the east is Forbes Town Rd. Roads shown include Highway 19, Highway 70, and Highway 99. Other labels include 'Porte-Magee Hwy', 'Sherokee Rd', 'Quincy Hwy', 'Walle Ford', 'Oroville River', and 'Porte Rd'.

Plenary Group Meeting

Oroville, California

December 11, 2001

Data / Information Management

Types of Data/Information

- Documents**
 - Two library locations:**
 - Oroville Library - 1820 Mitchell Avenue**
 - Sacramento – 1416 9th Street, Room 742**
 - DWR website**
- Time-series Data**
 - Example: flow, temperature**
 - Placed in the Interagency Ecological Program (IEP) database**
- Spatial Data/GIS Data**
 - Example: property parcels, recreation sites**
 - Entered in ArcView**
- Other Data**
 - Example: economic data, recreation survey results**

Data / Information Coordination

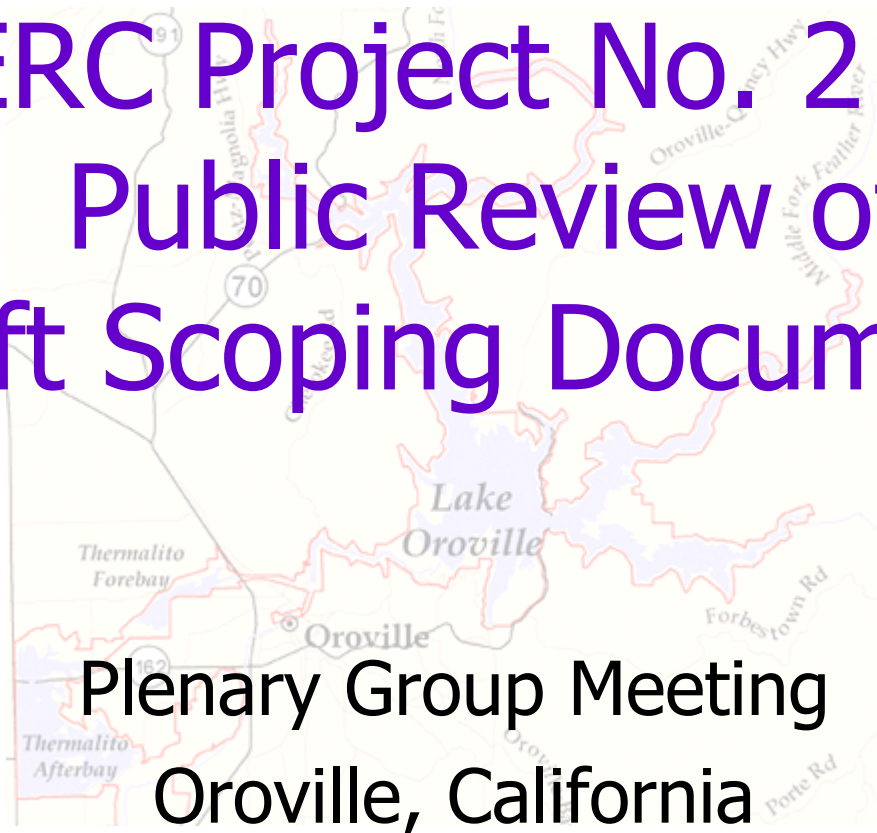
Developing Study Protocols

- **Most environmental studies involving listed species have standard sampling procedures**
- **Consultation with other agencies on some studies will result in procedures**
- **Some studies will require development of protocols**

Coordination

- **Draft study plans are being reviewed to check for:**
 - **Duplication of effort**
 - **Lowest common level of data needs**
 - **Ability to share/compare data between studies**
 - **Ensure that databases have necessary information**

Oroville Facilities Relicensing FERC Project No. 2100 Public Review of Draft Scoping Document 1



Plenary Group Meeting
Oroville, California

December 11, 2001

Scoping Meetings

- Scoping Meeting No. 1
8 Speakers
- Scoping Meeting No. 2
13 Speakers

Written Comments Received

- The deadline for submitting comments ended on November 29, 2001
- A total of 23 written comments have been received
 - Four State and Federal Agencies
 - Seven Water Contractors / Water Users Groups
 - Eight Stakeholder Groups

Written Comments

Agencies - Plumas National Forest, Department of Fish and Game, Electrical Oversight Board, State Water Resources Control Board

Water Contractors - State Water Contractors, Kern County Water Agency, Alameda County Flood Control and Water Conservation District, Castaic Lake Water Agency, Metropolitan Water District, Santa Clara Water District, Joint Water Districts, and Western Canal Water District.

Written Comments

Stakeholder Groups – California Business Properties, California Chamber of Commerce, Association of California Water Agencies, California Independent System Operator, Oroville Foundation of Flight, Southern California Water Committee, Paleo Resource Consultants, and Pursell Civil Engineering.

Comment Review Process

Progress:

- Developed Comment Tracking Matrix
- Obtain Clarifications on Comments (in progress)

Next Steps:

- Distribute comments to work groups for inclusion to study plans (Mid December)
- DWR Review of comments provide update to Plenary Group (Late January)
- Incorporate changes to SD1 Final and Study Plans for Plenary Group Review (February/March)